

Dart Hawkesbury 1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada Tel (613) 632-5200

Purchasing Receipts

PO No	Supplier	Line Item No	Rel	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Days	To
○ 0039811	AC1001-VC	5	1		R0.500	AISI 4140 Quenched &Tempered Steel Round Bar 0.500"* Dia.: AISI 4140 Q&T Round Bar: MAT'L: AISI 4130 QUENCHED & TEMPERED ROUND BAR AS PER ASTM 4140 QT OR ASTM 4142 QT				6	5/11/2018	6		5070044	Stock	5/10/2018	\$ 3.35 / ft	0	\$22
		-							Total:	6		6							\$1

Plex 5/10/2018 9:10 AM Dart Dubois Pascal

Dart Hawkesbury 1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada Tel (613) 632-5200

Purchasing Receipts

PO No	Supplier	Line Item No	Rel	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Uni
O039811	ACI001-VC	1	1	Net 30	MT-1144-R0.750	1144 Steel Proof Round Bar 0.750"": MATERIAL: AISI 1144 STRESSPROOF STEEL ROUND BAR ASTM A311 or UNS G11440				12	5/11/2018	12	-	\$069912	Stock	5/9/2018	\$ 2.79/ft
		2		-		6061-T6 Round Bar 1.50: MATERIAL: 6061- T6/T651/T6510/T6511/T62 ALUMINUM ROUND BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117 4128/4115/4116 OR QQ- AA-200/8 OR AMS-QQ-A- 200/8 OR AMS 4160 OR ASTM B221 OR ASTM B221 receive ft				40		40	6	\$069913	Stock	5/9/2018	\$ 6.35 / ft
		4				6061-T6 Bar .750 X 4.00: MATERIAL: 6061-T6/T6511/T6511/T6511/T65 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS-QQ-A-200/8 OR AMS-QQ-A-200/8 OR AMS-100 OR ASTM B211 OR ASTM B211 PROPERTY OF THE RESTANCE OF OF				12		12	All	S069914	Stock	5/9/2018	\$ 11.49 / ft
						TOTAL DELT FORMATOR			Total:	64		64					

Plex 5/9/2018 2:26 PM Dart Dubois Pascal



Dart Aerospace Ltd. 1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada

PURCHASE ORDER PO039811

Tel (613) 632-5200

Supplier: ACI001-VC

Acier Ouellette Inc. 935 Boul. Du Havre

Valleyfield QC

J6S 5L1 Canada Phone: 800 667 4248 Fax: 450 377 5696 PO No:

Due Date:

PO039811

PO Date: 5/14/18

5/14/18

Purchase Order Revision:

Revision Date:

Ship-To Contact:

Lavoie, ChantalPhone:

clavoie@dartaero.com

Ship To:

1270 Aberdeen Street

Hawkesbury

ON

K6A 1K7 Canada Phone: 613-632-5200 Via:

Ground

Pymt Terms:

Net 30

Freight Terms:

Special Comments: QUOTE NO. SOU0104308, SOU0104119

				Items						
Line Item	Part	Supplier Part No	Description	Status	Due Date	Order Quantity	Received Quantity		Unit Price (CAD)	Extended Price
1	MT-1144-R0.750		1144 Steel Proof Round Bar 0.750" : MATERIAL : AISI 1144 STRESSPROOF STEEL ROUND BAR ASTM A311 or UNS G11440	Firmed	5/10/18	12 ft	12	12 ft	\$2.78916666/ft MAY 0 9 20	
2	M6061T6R1.500		6061-T6 Round Bar 1.50 : MATERIAL: 6061- T6/T651/T6510/T6511/T62 ALUMINUM ROUND BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117 4128/4115/4116 OR QQ- AA-200/8 OR AMS-QQ-A- 200/8 OR AMS-QQ-A- 200/8 OR AMS 4160 OR ASTM B221 OR ASTM B221 receive ft	Firmed	5/10/18	40 ft	40	40 ft	\$6.3515/M	
3	MT-4140QT-R2.500		AISI 4140 Quenched &Tempered Steel Round Bar 0.500" Dia. : AISI 4140 Q&T Round Bar : MAT'L: AISI 4130 QUENCHED & TEMPERED ROUND BAR AS PER ASTM 4140 QT OR ASTM 4142 QT	Firmed	5/10/18	6 ft	0.00	6 ft	\$26.8612666/ft	\$161.17 DAS

Item Part Part No Description Status Date Quality 4 M6061T6B0.750X04.000 6061-T6 Bar .750 X 4.00 Firmed 5/10/18	Order Received Quantity Balance Price (CAD) Exten
: MATERIAL: 6061- T6/T651/T6510/T6511/T62 ALUMINUM BAR PER QQ-A-225/8 OR AMS-QQ- A-225/8 OR AMS 4117/4128/4115/4116 OR QQ-A-200/8 OR AMS-QQ- A-200/8 OR AMS 4160 OR ASTM B211 OR ASTM B221 receive ft	12 ft

Order Notes

Procurement Quality Clauses

A005 right of entry

A012 chemical and physical test report

A016 personnel qualification

A017 raw material identification (as applicable)

A026 certification of material conformance

A041 quality management system

A042 dart notification by supplier

A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 5/7/18 8:53 AM dart.lavoie.chantal



Dart Aerospace Ltd. 1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada

PURCHASE ORDER PO039811

Tel (613) 632-5200

Supplier:

ACI001-VC

Acier Ouellette Inc. 935 Boul, Du Havre

Valleyfield

QC

J6S 5L1 Canada Phone: 800 667 4248 Fax: 450 377 5696 PO No:

PO039811

PO Date: Due Date:

5/14/18 5/11/18

Purchase Order Revision:

Revision Date:

Ship-To Contact:

Lavoie, ChantalPhone:

clavoie@dartaero.com

Ship To:

1270 Aberdeen Street

Hawkesbury

ON

K6A 1K7 Canada Phone: 613-632-5200 Via:

Ground

Pymt Terms: Net 30

Freight Terms:

Special Comments: QUOTE NO. SOU0104308, SOU0104119

Items

Line Item		Supplier Part No	Description	Status	Due Date		Received Quantity	Balance	Unit Price (CAD)	Extended Price
3	MT- 4140QT- R2.500		AISI 4140 Quenched &Tempered Steel Round Bar 2.500" Dia. : AISI 4140 Q&T Round Bar : MAT'L: AISI 4130 QUENCHED & TEMPERED ROUND BAR AS PER ASTM 4140 QT OR ASTM 4142 QT	Firmed	5/11/18	6 ft	O ft	6 ft	\$26.8612666/ft	\$161.17
5	MT- 4140QT- R0,500		AISI 4140 Quenched &Tempered Steel Round Bar 0.500" Dia. : AISI 4140 Q&T Round Bar : MAT'L: AISI 4130 QUENCHED & TEMPERED ROUND BAR AS PER ASTM 4140 QT OR ASTM 4142 QT	Firmed	5/11/18	6 ft	6	6 ft	\$3.345/n MAY 1 0 2018	\$20.07 DA: 11 9-88
									Grand Total:	\$181.24

Order Notes

Procurement Quality Clauses

A005 right of entry

A012 chemical and physical test report

A016 personnel qualification

A017 raw material identification (as applicable)

A026 certification of material conformance

A041 quality management system

A042 dart notification by supplier

A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 5/10/18 7:50 AM dart.lavoie.chantal

1270 , ABERDEEN ST. ABERDEEN ST. 1270 , ABERDEEN ST. 1270 , ABERDEEN ST. 1271		
K6A 1K7 Att: CHANTAL LAVOIE Tél.: 613-632-55 Delivery Route 5 Delivery Route 5 Delivery Route 5 Delivery Route 5 18.00 12.00 5815 5815 Fig. 613-632-55 Att: CHANTAL LAVOIE Tél.: 613-632-55 Reight Qty 18.00 12.00 5815 Fig. 64.00 4907	Processed by	Eric Kaehlert
## ChanTal LaVolE Tél.: 613-632-55 Delivery Route 5 Delivery Route 5 Delivery Route 5		
Att: CHANTAL LAVOIE Tél.: 613-632-55 Delivery Route 5 Delivery Route 5 18.00 12.00 83.04 40.00 4.01 6.00	Salesman	
struction F-M Delivery Route 5 Product Description Weight Qty ROUND STRESSPROOF 3/4 (R) 18.00 12.00 RST-34 5815 18.00 12.00 RST-34 5815 18.00 12.00 RST-34 5815 18.00 12.00 RST-34 5815 83.04 40.00 RAL-112 5119 83.04 40.00 RAL-112 5119 40.00 44.01 6.00 ROUND 410 HEAT TREAT 1/2 (R) 4907 4.01 6.00 R4140-12H 4907 4.01 6.00	Carrier	OUELLEI I E VALLEYFIELD
Struction F-M Delivery Route 5 Product Description Weight Qty ROUND STRESSPROOF 3/4 (R) 18.00 12.00 RST-34 5815 18.00 12.00 I X 12' 1 X 12' 83.04 40.00 ROUND ALUT 1/2-661-T6 * 83.04 40.00 RAL-112 5119 40.00 2 X 20' 1 INE#2 40.00 ROUND 4140 HEAT TREAT 1/2 (R) 40.01 6.00 R4140-12H 4902 40.01 6.00	Credit Terme	Net 30 Days
Product Description Weight Qty	Page	1
ROUND STRESSPROOF 3/4 (R) RST-34 S815 1 X 12' LINE#1 ROUND ALU T 1/2-6061-T6 * RAL-112 2 X 20' LINE#2 HEAT: SX8161651 ROUND 4140 HEAT TREAT 1/2 (R) R4140-12H A 907 1 X 6' LINE#2	PCS NB	Internal Use Only
ROUND STRESSPROOF 3/4 (R) RST-34	CMD EXP B/O	IN I S C OUT
RST-34 5815 I X 12' LINE#1 heat: C124677 ROUND ALU 1 1/2-661-T6 * RAL-112 5119 Z X 20' LINE#2 HEAT: SX8161651 ROUND 4140 HEAT TREAT 1/2 (R) R4140-12H 4902		
1 X 12' LINE#1 heat: C124677 ROUND ALUT 1/2-6061-T6 * RAL-112 Z X 20' LINE#2 HEAT: SNB161651 ROUND 4140 HEAT TREAT 1/2 (R) 1 X 6' 1 X 7 8' 1 X 6' 1 X 7 8' 1 X 6' 1 X 7 8' 1 X 8'		MAY 0 8 2818
### ##################################	~ (
ROUND ALU 1 1/2-6061-T6 * RAL-112 5119 2 X 20' LINE#2 HEAT: SKB161651 ROUND 4140 HEAT TREAT 1/2 (R) R4140-12H A907 1 X 6' LINE#3	22	
RAL-112 2 X 20' LINE#2 HEAT: SX8161651 ROUND 4140 HEAT TREAT 1/2(R) R4140-12H 4.01 6.00	}	
2 X 20' LINE#2 HEAT: SKB161651 ROUND 4140 HEAT TREAT 1/2 (R) R4140-12H A902 X 6' LINE#2	×	
A X X 20 LINE#2 LINE#2 HEAT: SX8161651 ROUND 4140 HEAT TREAT 1/2 (R) R4140-12H A902 A K 6:	×	C MAY 0 \$ 2019
HEAT: SXB161651 ROUND 4140 HEAT TREAT 1/2 (R) R4140-12H 1 X 6' 1 X 6' 1 X 6'	. [
ROUND 4140 HEAT TREAT 1/2(R) R4140-12H 1 X 6'	.7	
1.86'	>	\ \ X
1767	_	4
	2	AMAY DO 2019 AM
)	DAS MAY 10 WES 9-89

Copy c000088065

CLI0001056 2018/05/07

Customer N°

Date

ACIER OUELLETTE INC. 935, Boul. du Hâvre Salaberry de Valleyfield (Québec) 365 5L1 Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248 Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

DELIVERY - CLIENT

2018/05/09

Delivery date

NIR: R-109516-6

DELIVERY - CLIENT

Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248 Fax: 450-377-5696 Mtl; 514-336-4246 Ext.: 866-456-4242

Shipped to

, Ontario,

HAWKESBURY, Ontario, K6A 1K7

1270, ABERDEEN ST.

DART AEROSPACE LTD

Billed to

CL10001056 Customer N° Date

Copy c000088065

2018/05/09 2018/05/07 Delivery date

P0039811 Your order N°

Processed by

Eric Kaehlert

Salesman

Carrier

OUELLETTE VALLEYFIELD

Net 30 Days

Credit Terme

Att: CHANTAL LAVOIE Tél.: 613-632-5200

Delivery Route

F R

Instruction

(7
9	U
Dane	20

DOUT

DAS 9-83

Product Description	Woight	Ç	11/100		PCS NB	4B		Internal Use Only	nal U	se O	nly
Hondara page 1	Weight	413	E/0	CMD	EXP	B/0	NI	н	S	U	
HEAT: 190696											
** TRANSFERT 26/6 DE ST-JEROME 07/05 **											
FLAT ALU 3/4 X 4 6061-T6 *	42.29	12.00	12.00 PI_\$CLB				-				
FAL-344 2596					>		- (7	MAY 69	00	
1 × 12,					5		イ				4
INE					12						Ó
HEA1: /U/40											

Conditions:

Total Weight (Lbs): 147.34

NIR: R-109516-6

within five (5) days with this document enclosed. Any merchandise that has been damaged, cut or modified cannot be returned. All goods returned must be with our authorization and are subject to All sold and delivered materials remain the property of "Acier Ouellette Inc" until payment is made in full, complete and cashed. All lost materials are at the buyer's expense. The warranty offered by "Acier Ouellette Inc." is the same as offered and honored by the manufacturer and his warranty is transferred by "Acier Ouellette Inc." is the client. The buyer hereby accepts to respect the following conditions: Net 30 days from billing date and the buyer accepts to pay administration charges of 2% per month (24% per annum) on all past due amounts over 30 days. Any default in respect with this contract will lead to payment by acceleration and permits to the seller, at his choice to claim for the balance due or the repossession of the goods sold. All claims must be made a 25% restocking charge.

Verified/By: Prepared By

Delivered By

Customer's Signature

Date

Total (\$CAD)

RST-34

48873

AC 9678

Union Drawn Steel II LP

1350 Burlington Street East, P.O. Box 98 Hamilton, Ontario, Canada L8N 3A2 Phone: (905) 547-4480; Fax: (905) 544-3852 1-800-263-9966

CERTIFICATE OF ANALYSI CERTIFICAT D'ANALYSE

SV OE LN DD U OA

HX IP PE D TI OE Á

DATE

07/21/17

CUSTOMER ORDER NO. NO. DE LA COMMANDE DU CLIENT

B 99644

MILL ORDER NO. NO. DE LA MILL

261333-00

PRODUCT DESCRIPTION PRODUIT DESCRIPTION

BILL OF LADING BON DE CONNAISSEMENT

L 94

FE10329343

YOUR ITEM # : V715412

3/4 RD

COLD FINISHED STEEL BARS CARBON COLD DRAWN & STRESS RELIEF ANNEALED "CENTURY" ASTM A311 CLASS B STANDARD AISI TOLERANCES

C .40/.48 MN 1.35/1.65 P .040MAX S .24/.33 TRANSPORT BY TRUCK - PROTECT WITH TARP CHEMICAL & MECHANICAL TEST REPORT REQUIRED ASTM A108

COUNTRY OF ORIGIN - CANADA HOT ROLL SOURCE : ARCELORMITTAL NAFTA CERTIFIED YES: X NO:

HEAT NUMBER C124677

.420

1.380 MN.

P. .008 S.

.258

SI. .200

CU.

٧.

AL.

.030

.001

NI.

SN.

.020CR.

.004

.006

.020

.004

MO.

PB.

MECHANICAL PROPERTIES/PROPRIÉTÉS MECANIQUES

HEAT NUMBER C124677

ELONGATION (2 INCHES) ALLONGEMENT

9.000

YIELD STRENGTH LIMIT D'ELASTICITE

108000

P.S.I. @ .2% OFFSET

REDUCTION OF AREA STRICTION

30.000

TENSILE STRENGTH

RESISTANCE A LA TRACTION 132000

P.S.I.

CB.

R.

HARDNESS DURETE

241 HB

MAG TEST ROTO TEST

ULTRA SONIC TEST

NO WELDING OR WELD REPAIR PERFORMED ON THIS MATERIAL. THIS MATERIAL WAS NOT EXPOSED TO MERCURY DURING PROCESSING OR WHILE IN OUR POSSESSION.

WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HAS BEEN TESTED IN ACCORDAL WITH SPECIFICATION, AND THAT THE RESULTS ARE CORRECT AS CONTAINED IN RECORDS OF THE COMPANY.

PAR LES PRÉSENTES NOUS CERTIFIONS QUE LA MADERP DÉCRITE À ÉTÉ TES CONFORMEMENT AUX SPÉCIFICATIONS ET QUE LES RÉSOLTATS SONT CORRECTS, COM INDIQUÉ DANS LES RESURES DE LA COMPAGNIE.

FORM 200 ISSUE 12-07-01

Fra - 2348 50286



bal Vietnam Biniom Co..LEG GLOBAL VIETNAM ALUMINIUM COMPANY LIMITED

Address: My Xuan Bi-Conac industrial zone, My Xuan town, Tan Thanh district,

Ba Ria-Vung Tau province, Viet Nam

Tel: Fax:

+84(0)643924954 +84(0)643924953

MILL TEST CERTIFICATE

Date: November 21, 2016

Consignee: SINOMETAL RESOURCES INC.

4455 RUE CONSENS SAINT-LAURENT, QUEBEC, H4S 1X5, CANADA

PO number: 16-P-312 Customer PO: Inventory Shipping Ref No.: 16-1476 LC No.: DC HMN615576

Date of issue: November 15, 2016

Item Coder 1043202 Die Number: D00186 Alloy & Temper: 6061-T6

Production Description: STANDARD ALUMINIUM EXTRUSION (Round Bar)

Round Bar 1.5"x 20' 6061-T6

Length (inch): 240

Bundle number: 16-P-312-028 16-P-312-030,16-P-312-031

Heat Number: SXB161651

Date: 24/10/2016

Applicable Specifications: ASTM B221 STANDARDS

CHEMICAL ANALYSIS: %

Si	Mg	Fa	Cu	Mn	Cr	Zn	774	Al	0	ther	n 1
				.,,,,	<u> </u>	AJA	1.		EACH	TOTAL	Romarks
0.675	0.955	0.183	0.266	0.019	0.095	0.015	0.018	97.680	<0.05	<0.10	22/10/2016

MECHANICAL ANALYSIS:

Ult. Strength (ksi)	Yield Strength (ksi)	Elongation % LN 2"	Remark:
38,9	35.6	10.9	22/10/2016

All profiles, each profile with each MTC, showing material shipped match aluminium alloy as per standard, with chemical analysis and mechanical analysis to match aluminium alloy standard.

We have been checked and tested in accordance with the specifications noted and have been found to meet all the applicable requirements. Certifications are kept on file for 36 months from the date of purchase and are available for review upon request, referring to ASTM and the PO number,

Quality Manager



trung tâm kiểm nohiệm công ty TNHH NHOM TOAN CÂU VIỆT NAM GLOBAL VIETNAM ALUMINIUM CO. LTD TESTING CENTER

RTIFICATE OF TEST FRTIFICAT N'ESAIS

R4140-12H

CUSTOMER ORDER NUMBER NUMÉRO DE COMMANDE DU CLIENT

AC00009558 PART NUMBER/NUMÉRO DE PIÈCE 50872

TRA-2676

Certification Date 25-SEP-2017

Invoice Number \$697927

506031

SOLD TO: VENDU À: ACIER OUELLETTE INC

SHIP TO: EXPÉDIÉ À: ACIER OUELLETTE INC.

22 BOULEVARD J-F KENNEDY ST JEROME QC J7Y 4B6

22 BOULEVARD J F KENNEDY SAINT JEROME OC J7Y 4

Description:

4142 CF HEAT TREATED S/R OR STRESS FREE BAR

Line Total: 160

1/2 RD X 12' R/L HEAT: 190696

ITEM: 506031

Specifications:

ASTM A434 CL BC 12

ASTM A193 M15

ASTM A322 13

ASTM A193 GR B7 M ASTM A29-A29M 15 ASTM A331 95

ASTM A108 13 ASTM A304 11

ASTM A962/A962 14

EN 10204 04

CHEMICAL ANALYSIS

C 0.42

MN 0.97

SI 0.26

P 0.011

0.022

S CR 1.04

0.20

CU

AL

CA

0.026

0.0008

RCPT: R294209

COUNTRY OF ORIGIN : SPAIN

MECHANICAL PROPERTIES ______

YLD STR KSI

ULT TEN

%ELONG IN 02 IN

IN AREA

%RED HARDNESS

DESCRIPTION

110.0

KSI 145.0

17.6

58.8

BHN 269

The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination. /Les informations ci-haut-mentionnées sont transcrites du certificat d'essais du manufacturier après vérification de l'état complet des spécifications inscrites sur le certificat. We hereby certify that the material covered by this report will meet the applicable requirements described herein, including any specification forming a part of the description. ./Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

The willful recording of false, fictitious, or fraudulent statements in connection with test results may be punishable as a felony under federal statutes. /Les informations fausses, fictives ou frauduleuses en rapport avec le résultat des essais sont punissables en vertu des lois fédérales.

Material did not come in contact with mercury while in our possession/Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites cihaut.

JOANNE DESPRES

MANAGER QUALITY ASSURANCE GÉRANT DE L'ASSURANCE QUALITÉ

CERTIFICATE OF TEST CERTIFICAT D'ESAIS

Page 02 of 02

Certification Date 25-SEP-2017

CUSTOMER ORDER NUMBER NUMÉRO DE COMMANDE DU CLIENT

AC00009558 PART NUMBER/NUMÉRO DE PIÈCE Invoice Number S697927

506031

SOLD TO: VENDU À: ACTER OUELLETTE INC

SHIP TO: EXPÉDIÉ À: ACTER OUELLETTE INC.

22 BOULEVARD J-F KENNEDY

ST JEROME OC J7Y 4B6

22 BOULEVARD J F KENNEDY SAINT JEROME OC J7Y 4

4142 CF HEAT TREATED S/R OR STRESS FREE BAR Description: Line Total: 160 LB 1/2 RD X 12' R/L ITEM: 506031 HEAT: 190696 END-QUENCH HARDENABILITY (JOMINY - RC) 7 11 13 14 15 9 10 5 6 2 3 1 54 55 54 57 56 56 55 59 58 57 60 60 59 58 60 24 30 32 18 26 28 20 22 16 47 46 45 51 49 48 53

GRAIN SIZE :7 -

MATERIAL IS FREE FROM MERCURY CONTAMINATION VACUUM DEGASSED

EDDY CURRENT/MAGNETIC TEST PERFORMED

THERMAL TREATMENT: OK

QUENCHING 1.562 F, TIME: (1): 45MIN; COOLING:(1): OIL

TEMPERATURE MEDIA AT THE START: (1) 95 F: TEMPERATURE MEDIA

AT THE FINISH (1) 122 F

TEMPERING 1.202 F; TIME(2) 150 MIN COOLING (2) AIR

TEMPOF (3) STRESS RELIEVED 1.102 F(3) 120 MIN

MACRO: OK

COMMENTS

country of origin: spain reduction ratio 167,8

> The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination. ./Les informations ci-haut-mentionnées sont transcrites du certificat d'essais du manufacturier après vérification de l'état complet des specifications inscrites sur le certificat. We hereby certify that the material covered by this report will meet the applicable requirements described herein, including any specification forming a part of the description. Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

> The willful recording of false, fictitious, or fraudulent statements in connection with test results may be punishable as a felony under federal statutes. /Les informations fausses, fictives ou frauduleuses en rapport avec le résultat des essais sont punissables en vertu des lois fédérales.

Material did not come in contact with mercury while in our possession/Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites cihaut

JOANNE DESPRES

summe Lespress

MANAGER QUALITY ASSURANCE GÉRANT DE L'ASSURANCE QUALITÉ 1AL-344-V

TRA 1897 4910.2

Test de dureté Rockwell Rockwell Hardness Test

Client / Customer:

LES ACIERS TRANSBEC (1997) LTEE.

Adresse / Address:

4054 BOUL LE CORBUSIER, #201

LAVAL, QC H7L5R2

commande

#: 7100203

bon de commande / Purchase order #: OU-48345

de matrice / Die #:

MS 15954

Description: 4x3/4" FLAT BAR

Alliage & trempage / Alloy & temper: 6061 T6

Longueur / Lenghi: 6096 mm

Contrôle / Control # : 553-1

Coulée / Cast #: 70740

Dureté Rockwell E /

Min. requis /

Max. permis /

Rockwell E hardness: 94 HRE

Min, required: 88 HRE

Max. permitted: 100 HRE

Composition chimique typique / Typical chemical composition:

	SI	Fe	Cu	Mn	Mg	Cr	Zn	Ti
6063	0,20 - 0,60	0,35 Mox	0.10 Max	0,10 Max	0,45 - 0,90	0.10 Max	0.10 Max	0,10 Max
6005	0,60 - 0,90	0,35 Max	0,10 Max	0,10 Max	0.40 - 0.60	0,10 Max	0,10 Max	0,10 Max
6005A	0,66-0,74	0,14 - 0,28	0,08 - 0,16	0.18 - 0.26	0,46 - 0,54	0.03 Max	0.05 Max	0.05 Max
6061	0,40 - 0,80	0,70 Max	0,15 - 0,40	0,15 Max	0,80 - 1,20	0,04 - 0.35	0.25 Max	0.15 Max
6351	0,7 - 1,3	0,5 Max	0,10 Max	0,40 - 0,80	0.40 - 0.80		0,20 Max	0.20 Max

Nous certifions que le matériel fourni rencontre les exigences chimiques telles qu'annoncées par la norme ASTM B-221-14 excepté pour la section 8.2 (nombre de spécimen) .

We hereby certify that the material supplied meets the chemical properties as published by the ASTM B-221-14 except for section 8.2 (number of specimen).

Sincèrement vôtre,

date: 2017-11-09

Yours truly,

Daniel Alfredo Pelletier Directeur Qualité Quality Director

F.07.04 rev0 Rapport depropriétés mécaniques.doc

MATE	1171	_ ''	EGEN I MON EGINGNI GIVIN
MATERIAL: MEO	GÍ: MAY	16	BO. 750X04000 PO/BATCH NO.: 038811/50699121
MATERIAL CERT REC'D: QUANTITY RECEIVED: QUANTITY INSPECTED: QUANTITY REJECTED:	12/12/12	Q C	THICKNESS ORDERED: 0.750 THICKNESS RECEIVED: 0.750 SHEET SIZE ORDERED: 1/A SHEET SIZE RECEIVED: 1/A
DESCRIPTION	(Ch	CR eck (N)	COMMENTS
SURFACE DAMAGE	Y	N	
CORRECT FINISH	VY)	N	
CORROSION	Y	(N)	
CORRECT GRAIN DIRECTION	W	M	
CORRECT MATERIAL PER M-DRAWING	Y	N	Astin B-221
CORRECT THICKNESS	(Y)	N	,
PHOTO REQUIRED	Y	(N)	11 1461010
CORRECT REF # TO LINK CERT	X	N	HENT-10140
CORRECT MATERIAL IDENTFICATION		1/1	

CUT SAMPLE PIECE OF	MATERIAL A	ND PREFORI	M A HARDNE	SS CHECK.	
F	RECORD RES	SULTS BELOV	V		
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

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testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if	required)
INSPECTED BY:	DAS 44	SIGNED OFF BY:	
DATE:	9-89 MAY 0 9 2018	DATE:	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

CORRECT M# ON THE MATERIAL

DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF

DOES THIS REQUIRE AN EXTRUSION REPORT

SPECIFICATION CONTROL DRAWING

0

PURCHASE MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR SPECIFICATION:

Q

QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) OR QQ-A-200/8 OR AMS-QQCA-200/8 (OR AMS 4160) OR ASTM B211 OR ASTM B221

B

PART NUMBER:

M6061T6B T.TTT X WW.WWW THICK | WIDTH

E.G. 1.0" X 12.0" BAR = M6061T6B1.000X12.000 WHERE "T.TTT" = THICKNESS IN INCHES
"WW.WWW" = WIDTH IN INCHES

DESIGN
DRAWN
CHECKED
MFG. APPR. APPROVED B REMOVE OQ.A-250/11 OPTION, REFORMAT NOTES, ADD
ASTM B211/B221 (ZN D7-1)
A NEW ISSUE 09.07.13 M6061T6B 6061-T6 BAR DART AEROSPACE LTD COPYRIGHT © 2001 BY DART AEROSPACE LTD

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MATERIAL: MGOS	217 AY (92	?1.50 018	20		PO/	BATCH	I NO.: <u>03.9</u>	311/506		
MATERIAL CERT REC'D: QUANTITY RECEIVED: QUANTITY INSPECTED: QUANTITY REJECTED:					THICKNESS ORDERED: 1.500 THICKNESS RECEIVED: 1.500 SHEET SIZE ORDERED: 1.500 SHEET SIZE RECEIVED: 1.500						
DESCRIPTION	(Cl	CR neck (N)				COI	MMEN	TS			
SURFACE DAMAGE	Y	IN									
CORRECT FINISH	Y	N.									
CORROSION	Y	N									
CORRECT GRAIN DIRECTION	Y	N	1								
CORRECT MATERIAL PER M-DRAWING	(Y)	N	1954	m	32	1					
CORRECT THICKNESS		N	7								
PHOTO REQUIRED	Y	(N)									
CORRECT REF # TO LINK CERT	\otimes	A	How	TH S	XB	1616	5/				
ORRECT MATERIAL IDENTFICATION	V	N	,								
CORRECT M# ON THE MATERIAL	(Y)	N									
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	(Z)							-		
DOES THIS REQUIRE AN EXTRUSION REPORT	Υ	(N)									
CUT SAMPLE PIECE			TERIAL .				RDNE	SS CHECK.			
			HRC		RB		RA	DUR D	WEBSTER		
YPE OF MATERIAL			11110		110	100	1171	DOND	VVLDGTLK		
IZE OF TEST SAMPLE				+		-		-	+		
IARDNESS / DUROMETER READI	NG	_		+					1		
		esters	located in	n the Qu	ality Off	fice					

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

ENGINEERING SIGNOFF (if required)

SIGNED OFF BY:

DATE:

9-89MAY 0 9 2018

QC 18 INSPECTION

INSPECTED BY: 11

RELEASED 2009 - 09 - 09

REV. B SHEET 1 OF 1 09 07 13 01 06 08 DATE DART AEROSPACE LTD
HAWKFSBURY, ONTARIO, CANADA
DRAWING NO.
M6061TGR S SO | B | REFORMAT DWG, ADD 8211& 8221 SPEC (ZN D8-1), | REF PAR 08-200A | A | NEW ISSUE | REV | REV | DESIGN

TRIGHT © 2001 BY DART AEROSPACE LTD nne 6061-T6 ROUND BAR CHECKED MEG APPR.
APPROVED AND DE APPR.
DATE 09.07.13

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WHERE "D.DDD" = DIAMETER IN INCHES EG. 5/8" ROUND BAR = M6061T6R0.625

M6061T6R D.DDD DIA.

PART NUMBER:

(9)

SPECIFICATION:

QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160) OR ASTM B211 OR ASTM B221

PURCHASE MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM ROUND BAR

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SPECIFICATION CONTROL DRAWING

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WATE	VIA.	_ ''	LOCAL TARGET CONTON TORM
MATERIAL: MT-	MAY	9/4 <u>-</u>	RO.750 PO/BATCH NO: 03981/3069912
MATERIAL CERT REC'D:	es L	2'	THICKNESS ORDERED: 0.750 THICKNESS RECEIVED: 0.750 SHEET SIZE ORDERED: 1/4 SHEET SIZE RECEIVED: 1/4
DESCRIPTION	(Ch	CR neck (N)	COMMENTS
SURFACE DAMAGE	Y	N	
CORRECT FINISH	Y	N	
CORROSION	Y	N	
CORRECT GRAIN DIRECTION	Y	N	
CORRECT MATERIAL PER M-DRAWING	(Y)	N	457m 4311
CORRECT THICKNESS	(Y)	N	V
PHOTO REQUIRED	Y	N	
CORRECT REF # TO LINK CERT	(Y)	N	Heat # 0124677
CORRECT MATERIAL IDENTFICATION	02	N	
CORRECT M# ON THE MATERIAL	(Y)	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	(M)	
DOES THIS REQUIRE AN		7	
EXTRUSION REPORT	Υ	N)	
CUT SAMPLE PIECE		RECO	TERIAL AND PREFORM A HARDNESS CHECK. ORD RESULTS BELOW HRC HRB DUR A DUR D WEBSTER
			TING I TING I DONA I DOND I WEBSIEK I

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)
INSPECTED BY:_	DAS 11	SIGNED OFF BY:
DATE:	9-8MAY 0 9 2018	DATE:

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

TYPE OF MATERIAL SIZE OF TEST SAMPLE

HARDNESS / DUROMETER READING

WM (OK WILD) ALROPAGE PROMINES COURS. CO.
MARCO PARTIES SPROOF STEEL
ROUND BAR ВУ DATE DESCRIPTION NEW ISSUE PURCHASE MATERIAL: AISI 1144 STRESSPROOF STEEL ROUND BAR REV. MT-1144-R [D.DDD] WHERE "D.DDD" = DIAMETER IN INCHES EG. 5/8" ROUND BAR = MT-1144-R0.625 SPECIFICATION CONTROL DRAWING ASTM A311 or UNS G11440 SPECIFICATION: PART NUMBER: 0 U ⋖

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MATERIAL: MT-5		200	PO/BATCH NO.: 0398/1/507004						
MATERIAL CERT REC'D: QUANTITY RECEIVED: QUANTITY INSPECTED: QUANTITY REJECTED:) e,	5		_ T S	HICK	NESS ORDE NESS RECE SIZE ORDE SIZE RECE	EIVED: _		500
DESCRIPTION	(Ch	CR eck				COMMEN	ITS		
SURFACE DAMAGE	100	N	7						
CORRECT FINISH	(0)	N							
CORROSION	Y	(N)							
CORRECT GRAIN DIRECTION	M	N							
CORRECT MATERIAL PER M-DRAWING	Y	N	75 Tr	n A2	9				
CORRECT THICKNESS	(1)	N							
PHOTO REQUIRED	Y	(N)	1 1						
CORRECT REF # TO LINK CERT	(4)	N	Hest.	# 190	068	6			
CORRECT MATERIAL IDENTFICATION	W	N		0)					
CORRECT M# ON THE MATERIAL	(Y)	N							
DOES THIS MATERIAL REQUIRE	0	0							
ENGINEERING SIGN OFF	Y	(N)							
DOES THIS REQUIRE AN		1							
EXTRUSION REPORT	Y	N							
CUT SAMPLE PIEC				AND PREFO		A HARDNE	ESS CH	ECK.	
			HRC	HRB		DUR A	DII	R D	WEBSTER
TYPE OF MATERIAL				111,0		201111	1		THE SOIL IN

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: DAS	SIGNED OFF BY:
DATE: 9-89 MAY 1 0 2018	DATE:

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

SIZE OF TEST SAMPLE

HARDNESS / DUROMETER READING

